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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,240	01/30/2007	Samuel Guerin	P-8715-US	6954

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EXAMINER	
GAMBETTA, KELLY M	

ART UNIT	PAPER NUMBER
1715	

NOTIFICATION DATE	DELIVERY MODE
10/19/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@pczlaw.com
Arch-USPTO@pczlaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/575,240	GUERIN ET AL.	
	Examiner	Art Unit	
	KELLY GAMBETTA	1715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *5 and 6* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *5 and 6* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/21/11*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 31 August 2011 have been fully considered but they are not persuasive. The applicant argues that Barkley and Okamoto do not teach the claimed sources. However, the claims only require the source to have a face. Thus the band source of Okamoto teaches this feature. As does Barkley, as a point or sphere has an infinite number of faces. The applicant attempts to argue that neither source is two dimensional, but this limitation is not in the claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The applicant argues that Barkley does not teach a continuously varying gradient regarding film thickness. However, the claim includes a thickness that increases "substantially continuously", which is not synonymous with a continuously varying gradient. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The applicant additionally argues that Barkley does not teach the claimed geometries. However, as claimed, Barkley defines a further plane as described in the claim where it is defined by the center of the source associated with a mask, the substrate and an intersecting edge of the mask so that the mask is positioned that its intersection of the surface of the source with the further plane and the lines in the further plane joining each edge of the source with the opposite edge of the substrate (see Figures 4 and 5, for example – the lines are drawn to illustrate the path of the

source vapor and show just this configuration, the source coats the opposite side of the substrate). As to the position of the mask designated by coordinates Hy and Hx as defined in the claims, it is noted that Barkley shows the same position in the mask in the Figures as is shown in the instant Figures. It is also noted that Hx and Hy are not defined by concrete values and therefore may be any number as the planes as shown in the Figures of Barkley certainly have an E, F, A, C and D as defined. Especially in combination with Okamoto.

Further, the applicant argues that the position of the masks is not result effective. Barkley teaches that the position of the mask (or shield) is dependant upon a desired distance between filaments, width of grading and distance of evaporation sources from evaporation (column 5 lines 65-70, for example). Therefore, the placement of the mask is dependant upon process conditions and thus is a result effective variable and may be modified by routine experimentation. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Barkley to include the position of the mask as defined by point Hx and Hy by routine experimentation based upon the desired distance between filaments, width of grading and distance of evaporation sources from evaporation. In order to overcome a rejection based upon a result effective variable, unexpected results must be shown commensurate in scope with the claim.

The applicant argues that Barkley and Okamoto do not allow the zooming in and maximum concentrations as discussed in the arguments and other benefits described in the instant disclosure. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988

F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Further, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Therefore, for at least these reasons, the rejections of the previous office action are maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barkley (US 2676114) in view of Okamoto et al. (US 3520716).

As to claims 5-6, Barkley teaches a method of simultaneously depositing at least two vapor materials from vapor sources on a single substrate (see Figure 5, reference numbers 51, 52 etc. are the sources, and reference number 45is a single substrate). Barkley teaches point sources. Okamoto et al. teaches the elongation of sources to make the process more efficient in column 6 lines 45-62, for example. It would have been obvious to one of ordinary skill in the art to modify Barkley to include a non point source as taught by Okamoto et al. in order to make the process more efficient, though as broadly claimed, either source may have a "face".

Barkley teaches the path of the vaporized material from each source to the substrate during deposition being partially interrupted by an associated mask (Figure 5, reference number 50), the positioning of the mask in a plane parallel to the plane defined by the substrate such that the material is deposited on the substrate in a thickness which increases substantially continuously in a direction along the substrate

(the coating thickness increases across the substrate as shown in Figures 6, 7, and 9, for example). Barkley defines a further plane as described in the claim where it is defined by the center of the source associated with a mask, the substrate and an intersecting edge of the mask so that the mask is positioned that its intersection of the surface of the source with the further plane and the lines in the further plane joining each edge of the source with the opposite edge of the substrate (see Figures 4 and 5, for example – the lines are drawn to illustrate the path of the source vapor and show just this configuration, the source coats the opposite side of the substrate). Barkley also teaches that the mask is movable as broadly as it is claimed, because at some point it may be either attached to or moved out of the vacuum chamber either during assembly or cleaning. Barkley et al. teaches that the width of coating depends upon the mask position in column 3 lines 40-50. Thus, one of ordinary skill in the art would recognize that the width of coating, or gradient, is determined by mask placement and will be modified based upon assembly and moving the mask before coating.

As to the position of the mask designated by coordinates Hy and Hx as defined in the claims, it is noted that Barkley shows the same position in the mask in the Figures as is shown in the instant Figures. It is also noted that Hx and Hy are not defined by concrete values and therefore may be any number as the planes as shown in the Figures of Barkley certainly have an E, F, A, C and D as defined. Further, Barkley teaches that the position of the mask (or shield) is dependant upon a desired distance between filaments, width of grading and distance of evaporation sources from evaporation (column 5 lines 65-70 and columns 3-6 et seq., for example). Barkley also

teaches that the position of the mask changes the desired result of the width of the coatings in column 3 lines 40-50. Therefore, the placement of the mask is dependant upon process conditions and thus is a result effective variable and may be modified by routine experimentation. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Barkley to include the position of the mask as defined by point Hx and Hy by routine experimentation based upon the desired distance between filaments, width of grading and distance of evaporation sources from evaporation.

Barkley teaches a separate mask associated with each vapor source as shown in Figure 3 and allows for more than one mask or shield in column 1 lines 15-20, for example, but shows the masks in an angled configuration. Barkley uses the separate masks to control the concentration gradients of different vapor deposition materials at certain desired points in column 3 line 70 – column 4 line12. Okamoto et al. teaches a configuration of masks associated with separate sources closer to that claimed as shown in Figures 4, 13, columns 2-4 et seq. and column 6 lines 42-69 for the same reasons – controlling the desired composition and concentration distribution of the separate coating sources in the film. Therefore, it would have been obvious to one of ordinary skill in the art to modify Barkley to include a separate mask for each different vapor source as claimed and as taught by Okamoto et al. in order to control the concentration gradients of different vapor deposition materials at certain desired points. Both Barkley (column 6 et seq.) and Okamoto (column 4 et seq.) teach different sources for different materials.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELLY GAMBETTA whose telephone number is (571)272-2668. The examiner can normally be reached on Monday - Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kelly M Gambetta/
Primary Examiner
Art Unit 1715

kmg